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STEUBING AND MCGUINNESS & MANARAS LLP
30 NAGOG PARK DRIVE
ACTON, MA 01720

EXAMINER

WILSON, ROBERT W

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 08/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/453,340

Applicant(s)

CAIN ET AL.

Examiner

Robert W Wilson

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-11, 14-18, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 11, 14-18, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2661

DETAILED ACTION

1.0 The application of Bradley Cain et al. for a "Priority Forwarding In A Communication System" which was filed on December 2, 1999. The application did not claim foreign priority. Claims 1-4, 7-11, 14-18, and 21-22 are pending.

Claim Rejections - 35 USC § 112

2.0 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.0 Claims 8-11, 14-18, & 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 8, and 15, What is meant by "wherein the second protocol is operably coupled to forward the message to the first protocol along with an indication of the priority level for the message"?

Claim Rejections - 35 USC § 103

4.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5.0 Claims 1-3, 7-10, 14-17, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baruch et al. (U.S. Patent No.: 6,487, 206 B1)

Referring to Claim 1, Baruch teaches a method for forwarding a message between a first protocol and a second protocol (Forwarding messages between a non-ATM protocol or first protocol and ATM protocol or second protocol per Abstract) the method comprising:

Art Unit: 2661

Associating with the first protocol a priority function for assigning a priority to the message (The non-ATM protocol has a service identifier or which defines per col 4 lines 13-67.)

Invoking the priority function by the second protocol in order to determine the priority level for the message (Service Identifier in the NON-ATM PDU is utilized to determine CLP and DLP in the ATM cell per col 3 line 46-col 5 line 7)

Forwarding the message along with an indication of the priority level of the message (ATM cell is forwarded with CLP or DLP or priority indicator per col 3 line 46-col 5 line 7)

In Addition:

Wherein invoking the priority function by the second protocol comprise: providing the second protocol with access to the priority function by providing a reference to the priority function (The ATM or second protocol invokes the CLP or DLP priority indicator based upon the service indicator of the NON-ATM PDU col 3 line 46-col 5 line 29) as claimed in **Claim 2**.

Wherein invoking the priority function by the second protocol comprises: providing the second protocol with access to the priority function by providing reference to the priority function (ATM provides CLP or DLP bits or reference to the priority function per col 3 line 46-col 5 line 29) as claimed in **Claim 3**.

Wherein forwarding the message by the second protocol to the first protocol comprising ("forwarding the message by the second protocol to the first protocol is that the priority of the first protocol is incorporated into the second protocol" is explained on Pg 6 lines 17-22. The applicant's reference teaches that the higher protocol message which already has the lower protocol priority incorporated is sent to the proper queue. Baruch teaches inserting the ATM protocol into the appropriate queue per Fig 2) and placing the message on the queue corresponding to the priority level (Fig 2) as claimed in **Claim 7**

Baruch does not particularly call for: forwarding a message but teaches forwarding of a non-ATM PDU per Abstract.

It would be obvious to one of ordinary skill in the art at the time of the invention that forwarding the non-ATM PDU performs the same function as forwarding a message.

Referring to Claim 8, Baruch teaches: A device (16 per Fig 1)
Priority function for assigning a priority level to a message associated with a first protocol (The non-ATM protocol has a service identifier or priority function or priority function per col 4 lines 13-67.)

A second protocol operably coupled to invoke the priority function in order to determine the priority level for this message (ATM protocol in which CLP or DLP are determined per col 3

Art Unit: 2661

line 46-col 5 line 7), wherein the second protocol is operable coupled to forward the message to the first protocol along with an indication of the priority level for the message (The examiner read the applicant's reference in the specification where the applicant claimed this limitation is explained on Pg 6 lines 17-22. The applicant's reference teaches that the higher protocol message which already has the lower protocol priority incorporated is sent to the proper queue. Baruch teaches that ATM is sent to the proper queue based upon CLP and DLP wherein the service identifier is taken into account in assigning the value of the CLP and DLP per col 3 lines 67-col 4 line 23 or the second protocol is operably coupled to forward the message to the first protocol along with an indication of the priority level for the message)

In Addition:

Wherein the priority function determines the priority level for the message based upon protocol-specific elements of the first protocol (service identifier or priority level per col 4 lines 4 lines 13-col 5 line 29) as claimed in **Claim 9**

Wherein the first protocol is operably coupled to provide the second protocol with access to the priority function, by providing a reference to the priority function (table per col 4 line 54-67. It would be obvious to one of ordinary skill in the art at the time of the invention that a label associated with the table could be utilized) as claimed in **Claim 10**.

Further comprising a plurality of queues interposed between the first protocol and the second protocol for interfacing the second protocol to the first, wherein each queue corresponds to one of the plurality of priority levels, and wherein the second protocol is operably coupled to place the message on the queue corresponding to a priority level (Fig 2) as claimed in **Claim 14**

Referring to Claim 15, A program product comprising a computer readable medium having embodied therein a compute program for providing priority forwarding of messages the computer program (It is within the level of one skilled in the art to implement the functions of Baruch into hardware and software or computer readable medium per col 5 lines 30-40) comprising.

A priority function for assigning a priority level to a message associated with a first protocol (The non-ATM protocol has a service identifier or priority function or priority function per col 4 lines 13-67.)

A second protocol programmed to invoke the priority function in order to determine the priority level for the message (ATM protocol in which CLP or DLP are determined per col 3 line 46-col 5 line 7. It is within the level of one skilled in the art to implement the functions of Baruch into hardware and software per col 5 lines 30-40),

wherein the second protocol is operable coupled to forward the message to the first protocol along with an indication of the priority level for the message (The examiner read the applicant's reference in the specification where the applicant claimed this limitation is explained on Pg 6

Art Unit: 2661

lines 17-22. The applicant's reference teaches that the higher protocol message which already has the lower protocol priority incorporated is sent to the proper queue. Baruch teaches that ATM is sent to the proper queue based upon CLP and DLP wherein the service identifier is taken into account in assigning the value of the CLP and DLP per col 3 lines 67-col 4 line 23 or the second protocol is operably coupled to forward the message to the first protocol along with an indication of the priority level for the message)

In Addition:

Wherein the priority function is programmed to determine the priority level for the message based upon protocol-specific elements of the first protocol (service identifier or priority level or protocol-specific elements per col 4 lines 4 lines 13-col 5 line 29) as claimed in **Claim 16**

Wherein the first protocol is programmed to provide the second protocol with access to the priority function (The NON-ATM PDU provides ATM with access to the service identifier per col 4 line 4-col 5 line 29) as claimed in **Claim 17**

Wherein the second protocol is programmed to forward the message to the first protocol by determining a queue from among the plurality of queues based upon the priority level for the message and placing the message on the queue corresponding to the priority level (Fig 2) as claimed in **Claim 21**.

Baruch does not particularly call for program product comprising a computer readable medium but teaches switches, ATM-non PDUs and ATM PDUs or per col 5 lines 30-40

It would be obvious to one of ordinary skill in the art at the time of the invention to build the software per col 5 lines 30-40 on a computer readable medium.

Referring to Claim 22, A method for forwarding a message through a layered protocol stack (Forward a Non-ATM PDU in an ATM cell or forwarding a message through a layered protocol stack per col 2 line 11-col 3 line 23)

Receiving the message by a first protocol of the layered protocol stack (28 is received by 16 per Fig 1)

Invoke by said first protocol a priority function associated with a second protocol of the layered protocol stack in order to determine a priority level for the message (The Service identifier in the NON-ATM PDU is utilized to determine the CLP or DLP or priority in the ATM per col 4 lines 54-67)

Forwarding the message by the first protocol to the second protocol according to the priority level of the message (The ATM message is forwarded with the CLP or DLP set which defines

Art Unit: 2661

the priority per col 4 lines 54-67)

Baruch does not particularly call for: layered stack but teaches non-ATM PDU and ATM PDU per Abstract

It would be obvious to one of ordinary skill in the art at the time of the invention that the non-ATM PDU and ATM PDU relate to each other via a layered stack.

Claim Rejections - 35 USC § 103

6.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7.0 Claims 4, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Baruch et al (U.S. Patent No.: 6,487,206 B1) in view of Wills (U.S. Patent No.: 6,002,692).

Referring to Claims 4, 11, and 18, Baruch teaches: the method of Claim 3, the device of claim 10, and the program product of claim 17,

Wherein providing the second protocol with access to the priority function comprises : providing the second protocol with a pointer to the priority function but teaches a table per col 4 lines 13-22) as claimed in Claim 4,

wherein the first protocol is operable coupled to provide the second protocol with access to the priority function by providing the second protocol with a pointer to the priority function but teaches a table per col 4 lines 13-22 as claimed in Claim 11,

and wherein the first protocol is programmed to provide the second protocol with access to the priority function by providing the second protocol with a pointer to the priority function but teaches a table per col 4 lines 13-22 as claimed in Claim 18.

Baruch does not expressly call for: pointer but teaches a table (It is well known in the art that table is an array of data in which each item is uniquely identified by a label or pointer)

Will teaches: pointer per col 7 lines 1-5.

Art Unit: 2661

It would be obvious to one of ordinary skill in the art at the time of the invention to utilize a pointer as a label to identify the position in the table or array.

9.0

Response to Amendment

10.0 Applicant's arguments filed 7/14/03 have been fully considered but they are not

persuasive.

The examiner respectfully disagrees with the applicant's argument that Baruch fails to show: "associating with the first protocol a priority function for assigning a priority level to the message... invoking the priority function by the second protocol in order to determine the priority level for a message; and forwarding the message along with an indication of the priority level of the message. Baruch teaches that the service identifier of Non-ATM PDU is utilized to define the CLP and DLP values in the ATM cell or indicating a priority value in a second message per col 4 lines 13-67.

The examiner respectfully disagrees with the applicant's argument "forwarding the message by the second protocol to the first protocol is that the priority of the first protocol is incorporated into the second protocol" is over-reaching. The examiner read the applicant's reference in the specification where the applicant claimed this limitation is explained on Pg 6 lines 17-22. The applicant's reference teaches that the higher protocol message which already has the lower protocol priority incorporated is sent to the proper queue.

The examiner respectfully disagrees with the applicant's argument that there is no motivation to utilize a pointer when utilizing a table. It is well known in the art that a table is an array of data which is uniquely identified by a label. The label defines the position of elements within the table or array. It would be obvious to one of ordinary skill in the art at the time of the invention to utilize a pointer as a label to identify the position in the array.

The examiner respectfully disagrees with the applicant argument it is not within the level of one skilled in the art to implement the functions of Baruch into hardware and software per col 5 lines 30-40. It would be obvious to one of ordinary skill in the art to store the software functions of Baruch on a computer readable medium.

11.0 Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

12.0 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The New IEEE Standard Dictionary of Electrical and Electronics Terms, dated 1993, Published by the IEEE, Pg 1136.

The IEE teaches that a (software) table is "A collection of data in which each item is uniquely identified by a label". It would be obvious to one of ordinary skill in the art at the time of the invention that the label is a pointer.

13.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone numbers for the

Art Unit: 2661

organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Robert W Wilson

Examiner

Art Unit 2661

RWW

July 26, 2003



DUNSTON
PATENT EXAMINER